R3G180-AA01-81

EC centrifugal fan

forward-curved, single-intake

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Nominal data

Type	**R3G180-AA01-81**
Motor	**M3G084-DF**

Phase		1~
Nominal voltage	VAC	115
Nominal voltage range	VAC	100 .. 130
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min^{-1}	1970
Power consumption	W	335
Current draw	A	3.9
Min. back pressure	Pa	200
Min. back pressure	in. wg	0.8
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

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Technical description

Weight	4.2 kg
Fan size	180 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, galvanized
Number of blades	38
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on top; rotor on bottom on request
Condensation drainage holes	None
Mode	Continuous operation (S1)
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limitation - PFC, passive - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1
Approval	EAC

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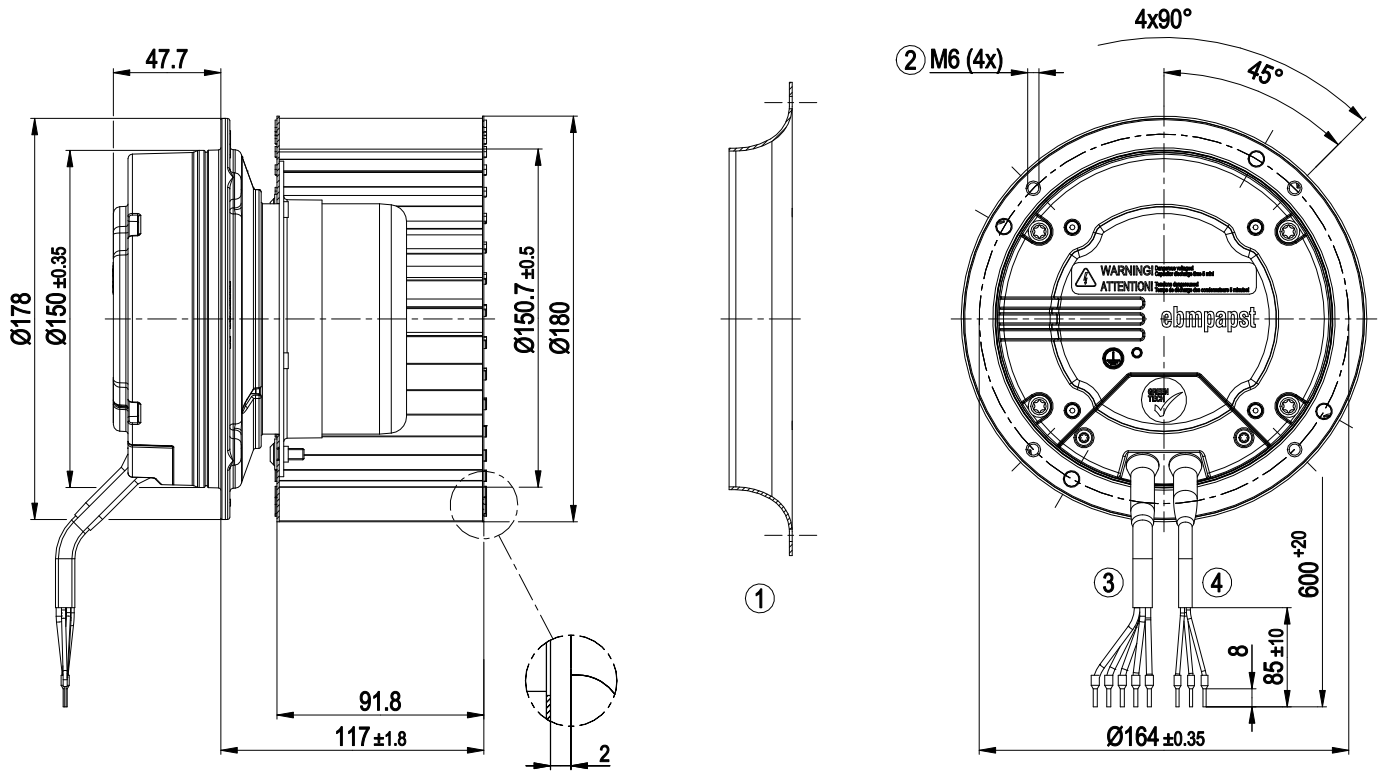
Product drawing



1	Accessory part: inlet ring 09597-2-4013 not included in scope of delivery
2	Max. clearance for screw 16 mm
3	Cable PVC AWG18, 5x crimped ferrules
4	Cable PVC AWG22, 3x crimped ferrules

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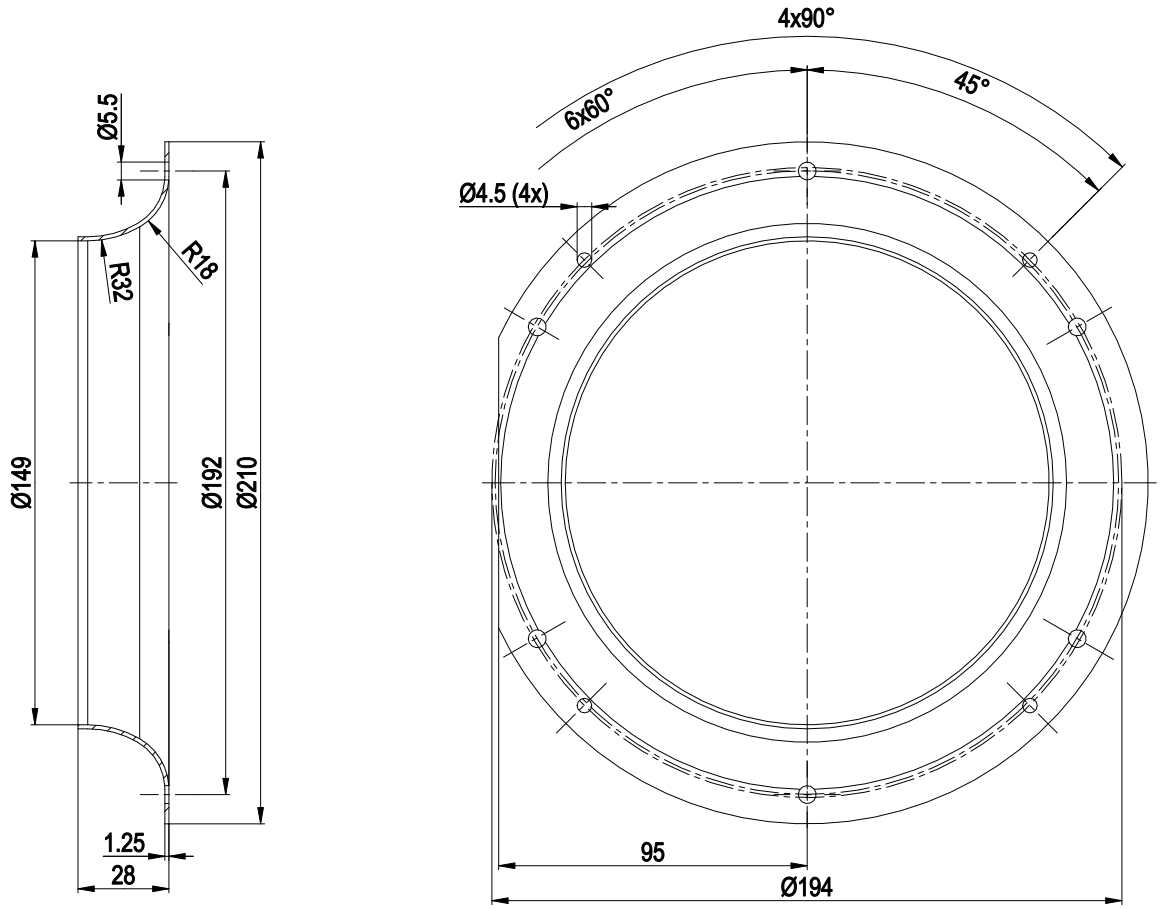
Accessory part



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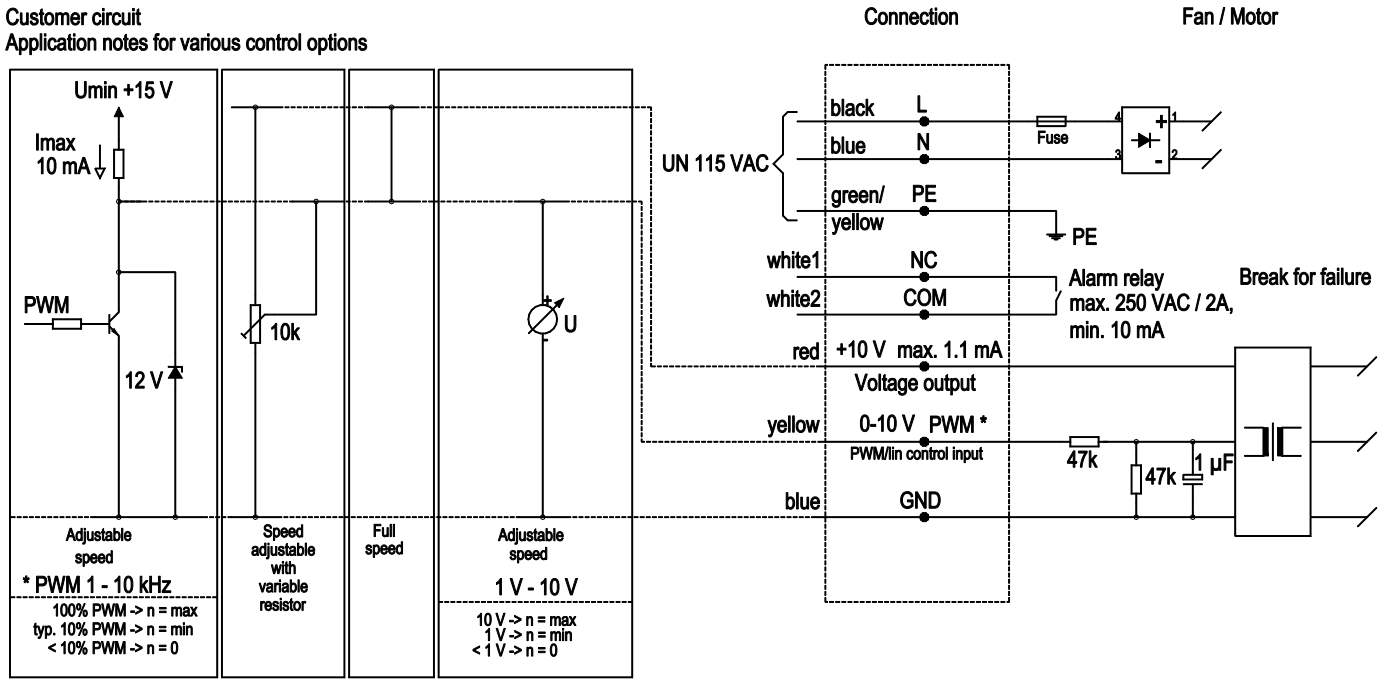
Connection diagram



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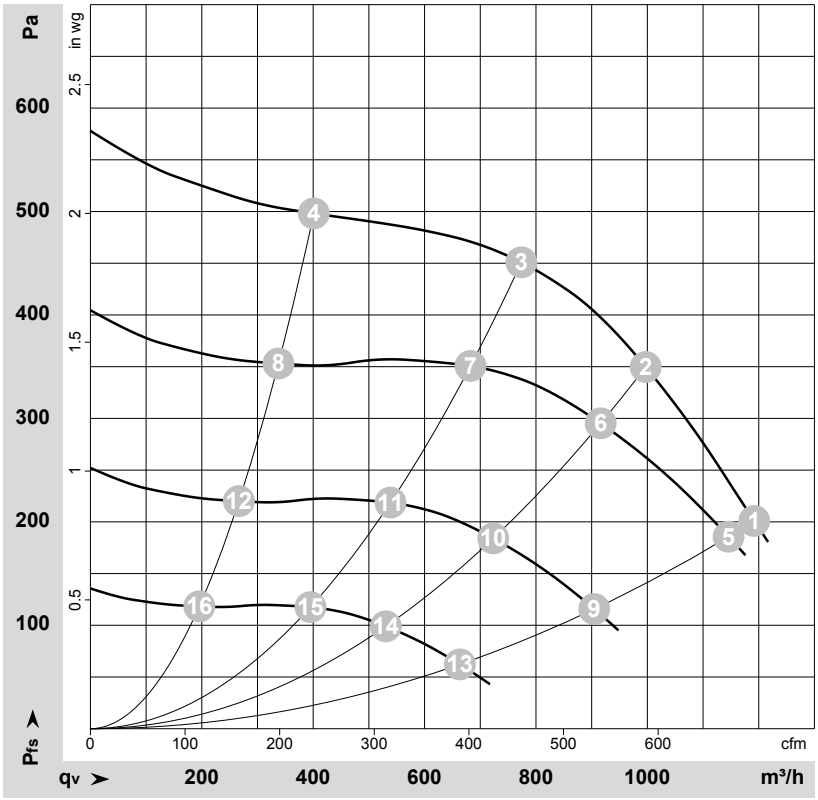
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-77641-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	U	f	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	115	50	1970	335	3.90	1190	200	700	0.80
2	115	50	2065	287	3.37	995	350	585	1.41
3	115	50	2155	232	2.77	775	450	455	1.81
4	115	50	2255	150	1.84	400	500	235	2.01
5	115	50	1900	298	3.45	1145	187	675	0.75
6	115	50	1900	224	2.63	915	295	540	1.18
7	115	50	1900	160	1.90	685	351	400	1.41
8	115	50	1900	89	1.10	340	353	200	1.42
9	115	50	1500	146	1.70	905	117	535	0.47
10	115	50	1500	110	1.29	725	184	425	0.74
11	115	50	1500	79	0.94	540	219	315	0.88
12	115	50	1500	44	0.54	265	220	155	0.88
13	115	50	1100	58	0.67	665	63	390	0.25
14	115	50	1100	43	0.51	530	99	310	0.40
15	115	50	1100	31	0.37	395	118	230	0.47
16	115	50	1100	17	0.21	195	118	115	0.47

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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